

**NOT FOR PUBLICATION**

UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY

MACDERMID PRINTING SOLUTIONS,	:	
L.L.C.,	:	CIVIL ACTION NO. 07-4325 (MLC)
	:	
Plaintiff,	:	<b>MEMORANDUM OPINION &amp; ORDER</b>
	:	
v.	:	
	:	
E.I. DU PONT DE NEMOURS &	:	
COMPANY,	:	
	:	
Defendant.	:	
_____	:	

**COOPER, District Judge**

The parties currently dispute five terms in United States Patent No. RE39,835 E ("`835 Patent") belonging to the plaintiff, MacDermid Printing Solutions, L.L.C. ("MacDermid"). MacDermid, alleges, inter alia, that the defendant, E.I. du Pont de Nemours & Company ("DuPont") is directly infringing, and has or will induce others to directly infringe one or more of the claims in the `835 Patent. (Dkt. entry no. 1, Compl. at 3-4.) DuPont counterclaims seeking a judgment declaring that all claims of the `835 Patent are invalid and not infringed by DuPont. (Dkt. entry no. 16, Answer at 5.)<sup>1</sup>

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<sup>1</sup> DuPont commenced a separate action against MacDermid, alleging, inter alia, that MacDermid manufactured and sold flexographic printing elements (1) that directly infringe one or more claims of DuPont's United States Patent No. 6,171,758 B1, and (2) to be used, treated, processed or developed in a manner that directly infringes one or more claims of DuPont's United States Patent No. 6,733,859 B2. See No. 06-3383 (MLC).

MacDermid moved to preliminarily enjoin DuPont from directly or indirectly infringing the '835 Patent. (Dkt. entry no. 3, Mot. for Prelim. Inj.) The Court denied that motion on September 4, 2008. (Dkt. entry no. 58, 9-4-08 Op.; dkt. entry no. 59, 9-3-08 Order.) The parties have currently come to an agreement regarding five earlier disputed terms. The Court now provides a final construction of the five remaining disputed terms in the '835 patent.

The parties filed briefs and documentation to support their respective proposed constructions.<sup>2</sup> The Court considered those papers and heard oral argument on August 27, 2009 (dkt. entry no. 95, Tr.), and thereby conducted a Markman hearing. See Markman v. Westview Instruments, 52 F.3d 967 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). The Court takes into account a "[Proposed] Consent Order on Claim Construction" filed by DuPont for both parties on October 6, 2009 ("Proposed Consent Order"). (Dkt. entry no. 91.) The Court issues the following findings of fact and conclusions of law as to the construction of the claims in the '835 Patent.

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<sup>2</sup> The submissions include: (1) MacDermid's Opening Markman Brief ("MacDermid Opening Brief"), with attached declaration and exhibits (dkt. entry no. 62); (2) DuPont's Opening Claim Construction Brief ("DuPont Opening Brief"), with attached certification and exhibits (dkt. entry no. 63); (3) MacDermid's Responsive Claim Construction Brief ("MacDermid Responsive Brief"), with attached declaration and exhibits (dkt. entry no. 64); (4) DuPont's Responsive Claim Construction Brief ("DuPont Responsive Brief"), with attached declaration and exhibits (dkt. entry no. 65); and (5) DuPont's SurReply to MacDermid's Responsive Brief ("DuPont SurReply"), with attached declaration and exhibits (dkt. entry no. 71).

## **BACKGROUND**

### **I. The Claims of the '835 Patent**

The '835 Patent is entitled "UV-Absorbing Support Layers and Flexographic Printing Elements Comprising Same." (Dkt. entry no. 64, Robinson Decl., Ex. 1, '835 Patent.) The abstract states that:

The present invention provides a method for producing direct-imaged flexographic printing elements such that both the front and back exposure times are economically efficient for the manufacturer. In one embodiment, the method comprises providing at least one solid photocurable element. The solid photocurable element comprises a solid photocurable material comprising an oxygen scavenger, a support layer having an actinic radiation absorbing compound integrated uniformly throughout such that it absorbs at least some actinic radiation during exposure, and a photoablative mask layer. The methods of the invention involve creating a floor in the solid photocurable material by back exposure through the support layer having the actinic radiation absorbing compound, transferring a negative image directly onto the solid photocurable material by photoablating the photoablative mask layer, followed by front exposure effective to cure the solid photocurable material.

(Id. at Abstract.) The '835 Patent is composed of 31 claims.

(Id. at cols. 10-14.) MacDermid's direct and indirect infringement claims against DuPont focus on claims 1-3, 13-17, 24-28, and 30-31 (Dkt. entry no. 3, Pl. Br. at 1; Dkt. entry no. 68, 3-12-09 Letter.) Of the asserted claims, only claims 1, 13, 24, and 30 are independent. ('835 Patent at cols. 10-14.) The parties disagree as to the meaning of five terms: (1) "support layer"; (2) "actinic radiation"; (3) "absorbs/absorbing"; (4)

"substantially opaque to actinic radiation"; and, (5) "oxygen scavenger."

Claim 1 of the '835 Patent states:

1. A method comprising:
  - a) providing at least one solid photocurable printing element comprising:
    - a support layer having an actinic radiation absorbing compound uniformly distributed throughout said support layer;
    - a layer of solid photocurable material that has first and second opposing major faces, said first opposing major face disposed upon said support layer, wherein said layer of solid photocurable material comprises an oxygen scavenger; and
    - a photoablative mask layer that is disposed on said second opposing major face, that is substantially opaque to actinic radiation, and is capable of being photoablated by a laser;
  - b) transferring graphic data to said solid photocurable printing element by photoablating said photoablative mask layer with a laser, thereby providing ablated and unablated areas forming an image, said ablated areas exposing said second opposing major face of said solid photocurable layer;
  - c) exposing said first opposing major face of said photocurable layer through said support layer;
  - d) exposing said ablated areas of said solid photocurable material to actinic radiation effective to cure said solid photocurable material; and
  - e) removing uncured photocurable material and said unablated areas of said photoablative mask layer from said element.

(Id. at col. 10, lines 38-67; see id. at col. 11, lines 1-6

(listing claims 2-3, which depend on claim 1).) In turn, claim

13 discloses:

1. A method for producing a flexographic printing plate, said method comprising:
  - a) providing at least one solid photocurable printing element comprising:
    - (i) a support layer having an actinic radiation absorbing compound uniformly distributed throughout said support layer;
    - (ii) a layer of solid photocurable material

- disposed on said support layer;
- (iii) an ablation layer that is disposed on said layer of solid photocurable material, wherein said ablation layer is substantially opaque to actinic radiation and is capable of being ablated by a laser;
- b) transferring graphic data to said solid photocurable printing element by selectively ablating portions of said ablation layer with a laser to create an image;
- c) back exposing said solid photocurable printing element to actinic radiation through said support layer;
- d) exposing said solid photocurable printing element to actinic radiation through the portions of the ablation layer that have been ablated to cure the solid photocurable printing element; and
- e) removing uncured photocurable material and any remaining ablation layer from said solid photocurable printing element.

(Id. at col. 11, lines 61-67 through col. 12, lines 1-17; see id. at col. 12, lines 18-29 (listing claims 14-17, which depend upon claim 13).) Claim 24, which is a product claim, describes:

A flexographic printing plate element comprising:

- a) a support layer which is capable of absorbing between about 80% and 99% of the actinic radiation used to back expose said printing plate element;
- b) at least one layer of solid photocurable material disposed on said support layer; and
- c) an ablation layer capable of being ablated by laser radiation and which is substantially opaque to actinic radiation.

(Id. at col. 13, lines 1-10; see id. at col. 13, lines 11-20 (listing claims 25-26, which depend upon claim 24).) Claim 30, another product claim, describes:

A flexographic printing plate element comprising:

- a. a support layer comprising an actinic radiation absorbing compound uniformly distributed throughout said support layer;
- b. at least one layer of solid photocurable material disposed on said support layer; and
- c. an ablation layer capable of being ablated by

laser radiation and which is substantially opaque to actinic radiation.

(Id. at col. 13, lines 13-22; see id. at col. 13, lines 23-25 (listing claim 31, which depends upon claim 30).)

## **II. Prosecution History**

The reissue application leading to the '835 Patent was filed in January 2004. (Dkt. entry no. 63, Critchley Cert., Ex. 3, '835 Patent Prosecution History ("Prosecution History") at B 3.) The application was a reissue application for United States Patent No. 6,413,699 ("'699 Patent") issued in July 2002. (Id. at B 12.) The reissue application included several new claims that were not present in the '699 Patent. (Id. at B 19-B 28.) In an Office Action mailed in September 2006, the United States Patent and Trademark Office ("PTO") examiner rejected claims 1-29 of the '835 Patent. (Id. at B 67-B 68.) Claims 19-27 were rejected as unpatentable over United States Patent No. 5,262,275 ("Fan") in view of United States Patent No. 4,141,736 ("Canty"). (Id. at B 70.) Claims 1-10, 13-18, and 24-29 were rejected as being unpatentable over United States Patent No. 4,994,344 ("Kurtz") in view of Fan. (Id. at B 71.) Claims 11-12 and 19-23 were also rejected as being unpatentable over Kurtz in view of Fan. (Id. at B 73.)

The applicants submitted an amendment and response in October 2006. (Id. at B 84.) The PTO issued a Notice of Allowance for the '835 Patent in February 2007. (Id. at B 141.) Claims 1-31 were all allowed and all rejections were withdrawn.

(Id. at B 145.) The '835 Patent was issued on September 11, 2007. (Id. at B 183.)

## **DISCUSSION**

### **I. Applicable Legal Standards**

The Court, in a patent infringement inquiry, first determines the scope and meaning of the patent claims as a matter of law. Markman, 52 F.3d at 979. The Court then compares the allegedly infringing device to each claim at issue to determine if "all of the limitations of at least one claim are present, either literally or by substantial equivalent, in the accused device." Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1323 (Fed. Cir. 2002). The Court is primarily concerned with the first step here.

There is a heavy presumption that a claim term carries its ordinary and customary meaning. CCS Fitness v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). The ordinary and customary meaning of a claim term is the meaning that a "person of ordinary skill in the art in question" would give such a term on the effective filing date of the patent application. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005). Such a person is deemed to interpret the claim term in the context of the entire patent, including the specification and prosecution history. Id. Thus, the words in a claim are generally given their ordinary and customary meaning in the absence of a contrary indication in the patent specification or file history. Wolverine World Wide v. Nike, Inc., 38 F.3d 1192, 1196 (Fed. Cir. 1994).

When interpreting an asserted patent claim, the Court looks first to the intrinsic evidence of record, which includes the patent's claims, specification, and complete prosecution history. Such intrinsic evidence is the most significant source for the legally operative meaning of disputed claim language. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996). In reviewing the intrinsic evidence, the Court considers the context in which a term is used within both the claim at issue and the claims not at issue. Phillips, 415 F.3d at 1314. The same term appearing in different claims should generally be given the same meaning unless it is clear from the specification and prosecution history that the term at issue has a different meaning from claim to claim. Fin Control Sys. Pty v. OAM, Inc., 265 F.3d 1311, 1318 (Fed. Cir. 2001). Similarly, differences between claims can be useful in arriving at the proper construction. Phillips, 415 F.3d at 1314. Under the doctrine of claim differentiation, the presence of a dependent claim adding a further limitation raises a presumption that the same limitation is not present in the independent claim. Phillips, 415 F.3d at 1315; RF Del. v. Pac. Keystone Techs., 326 F.3d 1255, 1263 (Fed. Cir. 2003). But such a presumption may be trumped by a clear and unambiguous disclaimer. Seachange Int'l v. C-COR Inc., 413 F.3d 1361, 1369 (Fed. Cir. 2005).

The specification is always highly relevant to the claim construction analysis, and is the single best guide to the meaning of a disputed term. Honeywell Int'l v. ITT Indus., 452 F.3d 1312, 1318 (Fed. Cir. 2006). The specification may contain an



intentional disclaimer or a disavowal of claim scope by the inventor, in which case the inventor's intention, expressed in the specification, is dispositive. Phillips, 415 F.3d at 1316. But it is improper to read a limitation from the specification into the claims themselves. Teleflex, 299 F.3d at 1326. Therefore, the Court should "not import limitations from a preferred embodiment" described in the specification. Seachange Int'l, 413 F.3d at 1377.

The prosecution history shows (1) how the inventor understood the patent, and (2) whether the inventor limited the invention during the course of the patent prosecution, thus narrowing the scope of the ultimately patented product. Phillips, 415 F.3d at 1317. As the prosecution history reflects ongoing negotiations between the inventor and the PTO, it is often less clear and less useful than the specification. Id.

The Court may in certain circumstances consider "extrinsic evidence", including "expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317. In general, such evidence is less reliable than its intrinsic counterparts. Id. at 1318. In some situations, the ordinary meaning of claim language as understood by a person of skill in the art will be readily apparent, and claim construction will then involve the simple application of the widely accepted meanings of commonly understood words. Id. at 1314. In such circumstances, general purpose dictionaries may be helpful. Id. However, "heavy reliance on the dictionary divorced from the intrinsic evidence

risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification.” Id. at 1321. Also, expert evidence may be useful for certain limited purposes. Id. at 1318. However, unsupported assertions by experts as to the definition of a claim term are not useful, and the after-the-fact testimony of the inventor is accorded little if any weight in the claim construction inquiry. Id.; Bell & Howell Document Mgmt Prods. Co. v. Altek Sys., 132 F.3d 701, 706 (Fed. Cir. 1997).

If, after applying these principles, the Court concludes that a claim term remains “insolubly ambiguous”, it must hold that the claim limitation is indefinite. Honeywell v. Int’l Trade Comm’n, 341 F.3d 1332, 1340-42 (Fed. Cir. 2003). When that occurs, the Court must strike down all claims of which the term is a part as indefinite and therefore invalid pursuant to 35 U.S.C. § 112. Aero Prods. Int’l v. Intex Recreation, 466 F.3d 1000, 1005 (Fed. Cir. 2006).

## **II. Legal Standards Applied Here**

The parties have reduced the number of terms in dispute and currently only dispute the construction of five claims. The Court therefore only addresses these remaining disputed terms here. It is noted that the parties have submitted a Proposed Consent Order as to a number of terms no longer in dispute, which the Court will enter along with this Opinion and Order.

### **III. Construction of the '835 Patent**

#### **A. "support layer"**

MacDermid proposes to construe the term "support layer" as "a flexible transparent material upon which the photopolymer material is disposed." (MacDermid Responsive Br. at 2.) DuPont proposes the construction "a flexible transparent material that retains or absorbs greater than 80% of actinic radiation." (DuPont Opening Br. at 1.)

DuPont contends that MacDermid made a statement in the prosecution history that the support layer must absorb between 80% and 99% of actinic radiation. (DuPont Opening Br. at 11.) The PTO initially rejected the proposed new claims in the '835 Patent as unpatentable over Kurtz in view of Fan and over Fan in view of Canty. (Id.) DuPont states that in order to overcome this rejection, MacDermid represented to the PTO examiner that "[e]ven if Fan and Kurtz are combined, they do not reveal the claimed invention. . . . [They] do not reveal that the substrate should absorb between 80%-99% of the incident backflash actinic radiation or between 85%-95% of the incident backflash radiation." (Id. at 12.) DuPont states that the PTO relied on this statement in withdrawing its rejection of the patent. (Id.) DuPont contends that this statement is of "critical significance" to the Court's construction of "support layer." (DuPont Responsive Br. at 3.) It states that for purposes of construction, MacDermid cannot dismiss the arguments it made to the PTO, and DuPont's construction should prevail. (Id. at 5.)

MacDermid contends that its construction is supported by the specification and the prosecution history. (MacDermid Opening Br. at 8.) The specification states that the "support layer of the photocurable element is preferably formed from a variety of flexible, transparent materials." (Id.) Further, the plain language of the claims states that "the solid photocurable material is disposed on the support layer." (Id.)

MacDermid contends that DuPont's proposed construction improperly narrows the term with its inclusion of an 80% absorption requirement. (MacDermid Responsive Br. at 2.) MacDermid states that this construction lacks support in the intrinsic evidence, contradicts the plain language of the '835 Patent, and that there is no claim language necessitating an 80% absorption requirement. (Id.; Tr. at 17.) It contends that DuPont improperly focuses on a single statement in the prosecution history that it takes out of context. (MacDermid Responsive Br. at 2-3.) MacDermid acknowledges that some claims in the '835 Patent do, in fact, contain a percentage limitation, but other claims contain no such limitation. (Id. at 3.) It states that claims should be considered in the context of other claims in the patent. (Id.) Thus, it contends that "support layer" should be construed the same way for all claims. (Id. at 4.)

MacDermid further argues that under the doctrine of claim differentiation, a limitation added to a dependent claim creates

a presumption that the added limitation does not exist in the independent claim. (Id.) MacDermid states that dependent claims 16 and 17 contain a percentage limitation, thereby creating the presumption that the limitation does not apply to the independent claim 13. (Id. at 4-5.) MacDermid further argues that the specification does not support DuPont's construction. (Id. at 5.) The specification states that the support layer must absorb "at least some actinic radiation," but does not contain a percentage limitation. (Id. at 6.)

Responding to DuPont's assertion regarding the applicant's statement during the prosecution history, MacDermid states that the disputed statement did not constitute a disavowal of claim scope. (Id. at 7-8.) MacDermid contends that the applicant distinguished the '835 Patent from Kurtz and Fan by noting that those patents did not disclose that the support layer should absorb UV radiation at all, not that those patents merely disclosed absorption in a lesser amount. (Id. at 9; Tr. at 22.) The applicant stated the Kurtz and Fan did not "reveal that the substrate should absorb U.V. radiation." (MacDermid Responsive Br. at 9.) MacDermid contends that after broadly distinguishing the prior art on this basis, the applicant then pointed to specific absorption limitations present in only some of the claims. (Id. at 10.) MacDermid states that one of ordinary skill in the art would not view these statements as creating a percentage limitation for all claims. (Id.) As such, the statements cannot constitute a disavowal of scope. (Id.)

MacDermid contends that DuPont looks to one statement without looking to the statement that precedes it. (Id. at 12.) It contends that there is no statement that would unambiguously disclaim the use of a support layer absorbing less than 80%.

MacDermid also highlights that in the prosecution history, a few pages before the disputed statement, when distinguishing the '835 Patent from Fan and Canty, the applicant specifically identified the claims that included a percentage limitation. (Tr. at 24.) MacDermid contends that the applicant made an identical argument when distinguishing from Fan and Kurtz. (Tr. at 25.) When distinguishing the '835 Patent from Canty and Fan, the claims that included a percentage limitation were specifically identified. (Id.) MacDermid contends that it follows that when the same argument was made three pages later in the prosecution history, when distinguishing from Fan and Kurtz, one would know that the referenced limitations only applied to the specified claims, even though not specified in the second argument. (Tr. at 25.) It contends that DuPont has misrepresented MacDermid's statements and there is no clear disavowal of claim scope. (Id. at 26.)

DuPont contends that the disputed statement was directed toward all the claims, not only the claims containing percentage limitations. (Tr. at 71.) It rejects MacDermid's contention that the Court should look to the part of the prosecution history distinguishing the '835 Patent from Fan and Canty. (Id.) It states that that portion of the prosecution history is

irrelevant. (Id.) DuPont states that the Kurtz patent provided for the absorption of most if not all of the exposure radiation. (Id. at 72.) To distinguish the '835 Patent from Kurtz, MacDermid argued that Kurtz does not specify that it is 80% or greater. (Id.) DuPont further notes that there were portions in the prosecution history that did refer to specific claims, but the statements made regarding the Kurtz and Fan patents did not, indicating that those statements did not refer to specific claims. (Id. at 75.)

The Court agrees with MacDermid's proposed construction that the support layer be construed as "a flexible transparent material upon which the photopolymer material is disposed." This construction comports with the plain language of the '835 Patent and the doctrine of claim differentiation. The Court further finds that the disputed statement in the prosecution history does not constitute a "clear disavowal of the claim scope."

The Court looks to the words of the claims to define the scope of the patented invention. See Phillips, 415 F.3d at 1312; Golight, Inc. v. Wal-Mart Stores, Inc., 355 F.3d 1327, 1331 (Fed. Cir. 2004) (noting "[i]n construing claims, the analytical focus must begin and remain centered on the claims themselves" (citation omitted)). There is a "heavy presumption that a claim term carries its ordinary and customary meaning." Golight, 355 F.3d at 1332 (citation omitted). The Court agrees with MacDermid that DuPont's proposed construction reads an additional

limitation into the term "support layer" that is not supported by the language of the claims.

The '835 Patent, in independent claims 1, 13, and 30, describes a support layer with no percentage limitation. ('835 Patent, col. 10, lines 43-45; col. 11, lines 65-67; col. 14; lines 14-19.) While there are some claims that include an absorption limit, the claims should be considered in the context of the other claims in the patent. Phillips, 415 F.3d at 1314. The doctrine of claim differentiation further provides that "[t]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Id. at 1315. Dependent claims 16 and 17 of the '835 Patent include percentage limitations, while independent claim 13 does not contain such a limitation. As such, there is a presumption that the independent claim does not contain an absorption limitation.

The specification provides further support for MacDermid's proposed construction. It provides that the support layer "is preferably formed from a variety of flexible, transparent materials." ('835 Patent, col. 6, lines 20-22.) The specification contains no absorption limitation.

The Court also finds that there was no clear disavowal of claim scope in the prosecution history. "Where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim" Golight, 355 F.3d at 1333



(citation omitted). Prior to making the statement currently in dispute, the applicant distinguished the claimed invention from Fan and Kurtz stating that those patents did not disclose that the support layer should absorb U.V. radiation, without indicating a percentage limitation. (Prosecution History at B 99.) The Court also notes that when distinguishing the claimed invention from Fan and Canty, the applicant made the same argument regarding U.V. absorption that it made to distinguish the claimed invention from Fan and Kurtz. (Id. at B 97.) When making the argument regarding Fan and Canty, the applicant specified that the absorption requirements it noted were limited to certain claims. (Id.) In making the same argument regarding the Fan and Kurtz patents, the applicant used the same language, but did not specify that the absorption requirements were limited to certain claims. (Id. at B 98.) Viewing the prosecution history as a whole and in view of the ambiguity created by the separate arguments, the Court finds that there was not a clear disavowal of claim scope. The statement does not rise to the level of an unequivocal disavowal.

**B. "actinic radiation"**

MacDermid proposes to construe "actinic radiation" as "radiation that is capable of cross-linking (curing) the photocurable materials of the invention." (MacDermid Opening Br. at 8.) DuPont proposes the construction "radiation capable of effecting a chemical change in an exposed moiety." (Tr. at 29.)

DuPont derives its construction from the specification. (Id. at 123.) DuPont contends that the specification defines actinic radiation, and this definition should be used. (Id.) The specification dictates that "actinic radiation is radiation capable of effecting a chemical change in an exposed moiety." (Id.; '835 Patent, col. 5, lines 13-16.) DuPont states that this is the unequivocal definition of actinic radiation and should thus be used in its construction.

DuPont further criticizes MacDermid's construction as defining the term by reference to the invention itself. (Tr. at 125.) DuPont contends that the claims define the scope of the invention, and as such, a claim cannot be defined by referring back to the invention. (Id.)

MacDermid contends that its construction is required by the intrinsic evidence of the '835 Patent. (MacDermid Opening Br. at 8.) It notes that the specification states that the photocurable materials of the invention should cross-link or cure, and thereby harden in at least some actinic wavelength region. (Id. at 7-8.) MacDermid stated, at oral argument, that it "would agree that actinic radiation is radiation capable of effecting a chemical change in an exposed moiety, including cross-linking or curing of the photocurable materials of the invention." (Tr. at 30.) MacDermid argues that it is clear from the '835 Patent that the actinic radiation needs to do a particular job. (Id. at 121.) Thus, the construction should describe this job. (Id.)

DuPont argues that the patent describes two materials that can undergo a chemical change in reaction to actinic radiation. (Id. at 125.) The photocurable layer is only one of them; the actinic radiation absorbing compound can also undergo a chemical change in reaction to actinic radiation. (Id.) DuPont thus contends that MacDermid's construction is incomplete and too limiting because it inappropriately narrows the definition of actinic radiation. (Id.) It states that MacDermid's proposed construction gives one example of actinic radiation, but cannot serve as its definition. (Id. at 127.)

The Court agrees with DuPont's construction. The specification clearly states "[a]s used herein, actinic radiation is radiation capable of effecting a chemical change in an exposed moiety." ('835 Patent, col. 5, lines 13-16.) Intrinsic evidence, including the claims and specification, is the most significant source for the legally operative meaning of disputed claim language. Vitronics, 90 F.3d at 1583. The specification here is very clear regarding the meaning of actinic radiation. MacDermid's construction is inappropriately limiting, and the Court will use the definition found in the specification.

**C. "absorbs/absorbing"**

MacDermid contends that no construction of "absorbs" and "absorbing" is necessary but, if the Court determines that a construction is necessary, that it be defined as "to take up by chemical or molecular action." (MacDermid Responsive Br. at 19.) DuPont originally proposed the construction "to retain wholly,

without reflection or transmission.” (DuPont Opening Br. at 9.) DuPont, during oral argument, stated that it was amenable to altering its construction to “to retain wholly, without reflection or transmission, that which is taken in.” (Tr. at 78.)

MacDermid contends that DuPont’s original proposed construction was too extreme. (MacDermid Responsive Br. at 19.) MacDermid contends that DuPont’s construction would require that the support layer retain all actinic radiation despite the fact that the ‘835 Patent acknowledges that the support layer is capable of taking in some radiation, not all. (Id.) MacDermid further notes that certain claims in the ‘835 Patent specify the amount of actinic radiation to be absorbed. (Id.) As such, MacDermid states that a construction requiring complete retention would conflict with these claims. (Id. at 20.) MacDermid states that DuPont provided a dictionary definition, from which it improperly excluded the phrase “that which is taken in.” (Id.) MacDermid states that this clause qualifies that only that which is taken in is, in fact, wholly retained. (Id.)

DuPont states that MacDermid is incorrect in characterizing its construction as requiring the complete absorption of all radiation. (Tr. at 77.) Instead, DuPont contends that its construction requires that only the portion of the radiation that is actually absorbed be wholly absorbed. (Id.)

The Court agrees with DuPont’s revised construction and construes absorbs/absorbing as “to retain wholly, without

reflection or transmission, that which is taken in." MacDermid's objection to DuPont's initial construction was that it required 100% absorption. DuPont has clarified its proposed construction with the insertion of the phrase "that which is taken in," making clear that 100% absorption is not required, but only 100% of that which is actually absorbed must necessarily be retained.

**D. "substantially opaque to actinic radiation"**

MacDermid proposes that the term "substantially opaque to actinic radiation" be construed as "impenetrable enough to actinic radiation such that the photocurable layer can still be removed during the development processing step." (MacDermid Opening Br. at 11.) DuPont first contends that the claim requires no construction because its meaning is clear and unambiguous and readily understood by one of ordinary skill in the art. (DuPont Responsive Br. at 9.) If construction is required, DuPont proposes that it be construed as "prevent or block all or nearly all transmission of actinic radiation to the photopolymerizable layer." (Id.) If more specificity is required, DuPont proposes that the construction include a requirement for "an optical density greater than or equal to 2.0." (Id. at 9-10.)

DuPont contends that its construction is consistent with the specification of the '835 Patent and with dictionary definitions of "substantially" and "opaque." (Id. at 10.) DuPont states that the word substantially means "considerable in quantity: significantly great." (Id.) It states that it illustrates that

some small, immaterial portion of actinic radiation may nevertheless pass through the material, but the amount is so little that the material remains "especially opaque" to actinic radiation. (Id.) As such, the clear meaning is "to prevent or block all or nearly all transmission of actinic radiation to the photopolymerizable layer."

DuPont further contends that its construction is supported by the specification of the '835 Patent. (Id. at 10.) DuPont states that the '835 Patent incorporates United States Patent No. 5,262,275 ("'275 Patent"). (Id.) It contends that the '275 Patent defines substantially opaque as preventing the transmission of actinic radiation to the photopolymerizable layer and having an optical density greater than 2.0. (Id.) DuPont contends that this construction should be adopted because of the incorporation of the '275 Patent into the '835 Patent. (Id.) DuPont criticizes MacDermid's construction as being vague and lacking a clear or definite meaning. (Id. at 11.) It contends that MacDermid merely replaces the phrase "substantially opaque" with "impenetrable enough" which provides no guidance to one of ordinary skill in the art. (Id.)

DuPont contends that MacDermid's "impenetrable enough," language is inherently contradictory and ambiguous. (Tr. at 85-86.) It contends that impenetrable means that nothing passes through. (Id. at 86.) DuPont contends that the ablation layer either is impenetrable or is not impenetrable; it cannot be "impenetrable enough." (Id.) It argues that the insertion of

the word "enough" creates an oxymoron. (Id. at 86-87.) DuPont also states that the inclusion of "development processing step" is ambiguous because it does not specify the development method that should be used to determine if the photocurable layer can be removed. (Id. at 87.)

MacDermid contends that its construction is consistent with and supported by the specification. (MacDermid Opening Br. at 11.) It notes that the patent's emphasis on preventing the curing of the photocurable layer during exposure in order to later remove it during development would lead one of ordinary skill in the art to agree with its construction. (Id.)

MacDermid also looks to dictionary definitions defining "opaque" as impenetrable by a form of radiant energy other than visible light and "substantially" as considerable in degree, amount, or extent. (MacDermid Opening Br. at 12.) MacDermid contends DuPont's construction is not consistent with the term substantially. (Tr. at 112.) MacDermid further contends that the '275 Patent was not incorporated in its entirety, and was not incorporated regarding the term "substantially opaque." (Id. at 112-13.) MacDermid further argues that DuPont's construction reads out the word substantially. (Tr. at 48.) MacDermid contends that the word substantially is meaningful and thus cannot be read out of the construction. (Id.)

The Court finds that no construction is necessary for the claim "substantially opaque to actinic radiation." Even if the '275 Patent is deemed to be incorporated in its entirety, the

language DuPont cites does not define "substantially opaque," but rather defines "radiation opaque." (Dupont Responsive Br., Critchley Declaration, Ex. B, '275 Patent.) The Court agrees with MacDermid that the term "substantially" as a modifier of "opaque" is important and relevant. The Court does not find it clarifying, however, to substitute "substantially opaque" with "impenetrable enough." Both parties seem to agree on the meanings of substantial and opaque. As such, the Court finds no construction necessary because the phrase would be readily understood by one of ordinary skill in the art.

#### **E. "oxygen scavenger"**

MacDermid defines the term, "oxygen scavenger", as "[a] chemical compound that is included in the photocurable layer that reacts with oxygen and/or oxygen derived species in order to mitigate the deleterious effects of oxygen and/or oxygen derived species on the photocurable layer." (MacDermid Responsive Br. at 21.) DuPont defines the term as "[a] chemical compound, added to a photocurable material, that is oxidized by (i.e., reacts with) oxygen." (DuPont SurReply at 6.)

MacDermid argues that its proposed construction is supported by (1) the '835 Patent specification, and (2) the dictionary definition of scavenger. (MacDermid Responsive Br. at 22.) It looks to two dictionaries that define scavenger as "any substance added to a system or mixture to consume or inactivate traces of impurities," and a "substance or species which scavenges free radicals or other species." (Id.) As such, it argues a person



of ordinary skill in the art would agree with its proposed construction.

MacDermid criticizes DuPont's construction for its failure to specify how the compound reacts with oxygen. (Tr. at 49.) MacDermid emphasizes that the purpose of the scavenger is to counter the effects of oxygen inhibition and that this purpose is integral to the construction. (Id. at 50.) MacDermid contends that DuPont's construction ignores the purpose and is thus incomplete. (Id. at 51.)

DuPont contends that its proposed construction is supported by both the specification of the '835 Patent and the prosecution history for the original '699 Patent. (DuPont SurReply at 6.) DuPont notes that the '835 Patent instructs that the oxygen scavenger should be incorporated into the photocurable material to counter the effects of oxygen inhibition, but provides no other information that proves helpful in construing the claim. (Id.) DuPont then looks to the prosecution history of the original '699 Patent in which MacDermid distinguished the patent over prior art by stating that there was no indication that the compounds in the prior art "could react with, and thereby 'scavenge' oxygen." (Id.) DuPont further states that the dictionary provides that a scavenger is "a chemically active substance acting to make innocuous or remove an undesirable substance" or "any substance added to a system or mixture to consume or inactivate traces of impurities." (Id.) As such, it contends that its definition is consistent with both the

intrinsic evidence of the '835 Patent and the ordinary meaning of scavenger. (Id.)

DuPont contends that the two parties agree on the first portion of the construction. (Tr. at 92.) DuPont takes issue with MacDermid's construction, insofar as it includes, the inclusion of the phrases "oxygen derived species" and "mitigate the deleterious effects." (Id. at 93.) DuPont argues that "oxygen derived species" is found nowhere in the specification, the prosecution history, or in any extrinsic evidence. (Id. at 93.) It further contends that the term "deleterious effects" is vague and could encompass different meanings. (Id.) DuPont states that the specification is illuminating in this situation and it dictates that the oxygen scavenger serves to counter the effects of oxygen. (Id. at 93-94.)

The Court, upon considering the parties' respective arguments, finds that the claim "oxygen scavenger" should be construed consistent with the specification, as "a chemical compound included in the photocurable layer that reacts with oxygen to counter the effects of oxygen inhibition." (See '835 Patent at col 2, lines 45-50; col. 5, lines 24-29.) DuPont's concerns with MacDermid's construction focused on the inclusion of the terms "deleterious effects" and "oxygen-derived species." MacDermid's primary concern with DuPont's construction was that it failed to identify the purpose of the oxygen scavenger. Using the language found in the specification serves to allay both parties' concerns. It includes the purpose of the oxygen

scavenger without including MacDermid's proposed vague language. DuPont, itself, noted during oral argument that the scavenger must have an impact on the adverse effects of oxidation. As such, construing the claim using the language of the specification will best serve both parties' goals. For good cause appearing;

**IT IS THEREFORE** on this 15th day of March, 2010,  
**ORDERED** that the Court finds that, in United States Patent No.  
RE39,835 E:

**THE TERM "SUPPORT LAYER"** is construed to mean "a flexible transparent material upon which the photopolymer material is disposed"; and

**THE TERM "ACTINIC RADIATION"** is construed to mean "radiation capable of effecting a chemical change in an exposed moiety"; and

**THE TERM "ABSORBS/ABSORBING"** is construed to mean "to retain wholly, without reflection or transmission, that which is taken in"; and

**THE TERM "SUBSTANTIALLY OPAQUE TO ACTINIC RADIATION"** does not require construction; and

**THE TERM "OXYGEN SCAVENGER"** is construed to mean "a chemical compound included in the photocurable layer that reacts with oxygen to counter the effects of oxygen inhibition."

s/Mary L. Cooper  
**MARY L. COOPER**  
United States District Judge